The objection to claim 11 under 35 USC 112 is not well founded. These are generic teachings of how to obtain p53as sequences and antibodies to them at the high and low end of the mammalian class. One skilled in the art is therefore clearly enabled to practice the invention with respect to any mammal. There is no requirement for undue experimentation since the procedure becomes "cookbook" after reading of the specification. Further, since teaching is clearly present as to how to make unique antibodies for p53as which do not react with p53, it is a simple matter for one skilled in the art to cleave p53as and react the fragments with the unique antibody to isolate the desired peptide. There is no ambiguity and the claims can clearly be readily practiced by one skilled in the art.

The objection with respect to the "carboxy terminus as being uniquely different" has been overcome by amendment. It is now clear that the carboxy terminus of p53as contains a unique epitope not present in p53.

The objection to the term "p53as protein" is unwarranted. "p53as protein" has been clearly defined in both the specification and claims, i.e. it is essentially identical to p53 up to the final 50 carboxy terminal amino acids. The final 50 amino acids of p53as lack the negative regulatory domain of p53 and the final 50 amino acids of p53as contain a unique epitope not found in p53. There is no requirement in the law that a generic claim to a peptide be accompanied by a sequence I.D. number. All that is necessary is that the metes and bounds of the claim be understood and they would be understood here by one skilled in the art.

It is clearly established law that a patent attorney may be his or her own lexicographer. "p53as protein" is clearly defined in the specification and claims. An unduly restrictive sequence I.D. number is not required.

The Examiner has rejected Claim 11 as being anticipated by Arai et al.

This is not an appropriate rejection for at least two reasons. In the first place, Arai et al. does not disclose or suggest a purified peptide which contains an epitope which distinguishes from p53.

Secondly, the alternatively spliced p53 of Arai et al. is not a p53as as presently claimed. p53as is a perpetually active form of p53 since it lacks the negative regulatory domain of p53 and p53as contains a unique epitope which is not present in p53.

By contrast, the sequence of Arai et al. is not suggested as being active at all nor does Arai et al. suggest that the Arai et al. sequence is present in normal cellular environments. Arai et al. obtained his structure from chemically transformed cells not from normal cells. The amino acid sequence predicted (not prepared or isolated) by Arai referred to by the Examiner is not the p53as terminal sequence but is embedded. It is not a separate peptide. Furthermore, the entire Arai et al. sequence is not p53as. The final nucleic acids of the encoding sequence of Arai et al. simply do not match the encoding sequence of p53as of either naturally occurring p53 or naturally occurring p53as.

Please note that the clone of Arai et al. is distinct from p53as in structure and function. In structure, it has a mutation of the p53 gene coding region whereby a cyst residue at amino acid 132 is replaced by a phe residue. See Arai et al., 1986, page 3236 for entire coding sequence of p53-M-8 with the change noted.

In function, the M-8 clone lacks the properties of p53as. p53as has the properties of p53 including:

1. binding efficiently and specifically to the p53 consensus sequence in DNA and forming tetramers (see Kulesz-Martin et al., Mol. Cell. Bio., pp. 1698-1708, March 1994, and Wu et al., EMBO, Vol. 13, pp 4823-4830, 1994, and

2. transcriptional activation suppression of growth. (Wu et al., PNAS, pp. 8982-8987, August 1997).

M-8 has properties of mutant p53 including:

1. transforming cells rather than suppressing transformation (Eliyahu et al., Oncogene 3:313-321, 1988); and

2. forming monomers and dimers, not tetramers (Hainaut and Milner, EMBO 11:3513-3520, 1992).

There is no reason, teaching or suggestion in any of the cited art for taking a specific region of mutant p53, translating it and making a specific peptide from it. The specific peptide in accordance with the present invention, has utility with respect to p53as activity but has no utility at all with respect to the cited M-8 mutant which has no p53 type activity at all.

In view of the foregoing, it is clear that all rejections should be withdrawn.

Respectfully submitted,

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